Purpose/Objective: Patients (pts) with locally advanced soft tissue sarcoma of the extremities or trunk wall are frequently treated with neo-adjuvant treatment followed by wide resection. Pre-operative radiotherapy (RT) is one of these validated options. To optimize outcome, NBTXR3, functionalized hafnium oxide nanoparticles, have been developed as selective radioenhancer, which may represent a breakthrough approach for the local treatment of solid tumors. The high electron density of NBTXR3 nanoparticles when exposed to radiotherapy, may allow absorption/deposition of a high energy dose within the cancer cell, and possibly improve outcome.
Materials and Methods: Pts received a single intratumor (IT) injection of NBTXR3 at fixed concentration (53.3 g/L), volume escalated from level 1 (2.5% of tumor volume) to level 4 (20% of tumor volume), followed by RT (50 Gy in 25 fractions of 2 Gy over 5 weeks). Primary endpoints include feasibility of the IT implantation and safety. Secondary endpoints focus on efficacy such as pathological and RECIST response, IT residency of NBTXR3 over the whole RT time, and operability.
Results: Out of 21 pts included, 20 are evaluable: they underwent a wide surgical resection and received the planned radiotherapy. Feasibility of the IT injection was confirmed. The treatment was safe. Main grade 1-2 toxicities related to NBTXR3 were injection pain/reaction (4 pts), fever (2 pts), abdominal pain (1 pt), pruritus (1 pt) and paresthesia (1 pt). At volume 20%, 2 pts had grade 3 pain at the injection site. Results demonstrate that one injection of NBTXR3 provides adequate bioavailability of NBTXR3 over five weeks of radiotherapy. No leakage of NBTXR3 to the adjoining healthy tissues was observed. Further, NBTXR3 persistence was established by CT scan before surgery. At Volumes 2.5%,5%,10%, and 20%, the median change in sarcoma volume was respectively 13%; 40%, 44% and 51%. The percentage of residual and viable cells was 34% at the chosen maximum tolerated 10% level of tumour volume.
Conclusions: Injection of NBTXR3 was very well tolerated until 10% of tumor volume. NBTXR3 with preoperative RT seems to be an effective neo-adjuvant treatment for pts with locally advanced STS. An international phase II/III will start in the Q4 2014. The recommended volume is 10% of tumor volume, for this prospective study comparing this investigational treatment to pre-operative RT

PD-0046

Outcome according to pelvic radiotherapy in the GETUG 12 phase III trial for high-risk localized prostate cancer

P. Blanchard[1], L. Faivre[2], F. Lesaunier[3], N. Salem[4], N. Mesgouez-Nebout[5], E. Deniaud-Alexandre[6], J.M. Ferrero[7], N. Houédé[8], M. Habibian[9], K. Fizazi[10]
[1]*Gustave Roussy, Radiation Oncology, Villejuif, France*
[2]*Gustave Roussy, Biostatistics, Villejuif, France*
[3]*Centre François Baclesse, Radiation Oncology, Caen, France*
[4]*Institut Paoli Calmette, Radiation Oncology, Marseille, France*
[5]*Institut de Cancérologie de l'Ouest, Radiation Oncology, Angers, France*
[6]*Centre Hospitalier de Vendée, Radiation Oncology, La Roche sur Yon, France*
[8]*Institut Bergonié, Medical Oncology, Bordeaux, France*
[9]*Unicancer, Trial Management, Paris, France*
[10]*Gustave Roussy, Medical Oncology, Villejuif, France*

Purpose/Objective: The role of pelvic elective nodal irradiation (ENI) in the management of prostate cancer is still controversial. Despite negative clinical trials, clinical practices vary greatly, even in patients at high risk of pelvic lymph node dissemination. The aim of this study was to analyze the role of pelvic radiotherapy on the outcome in high-risk localized prostate cancer patients included in the recently reported GETUG 12 trial (Fizazi et al, ASCO 2014).
Materials and Methods: Eligibility criteria included non-pretreated high-risk localized CaP, defined as one or more of the following criteria: T3-T4, Gleason score (GS)>7, PSA>20 ng/mL, pN+ (stratification factors). All pts had a staging pelvic lymph node dissection. Pts were randomly assigned to either goserelin 10.8 mg every 3 months for 3 years and 4 cycles of docetaxel 70 mg/m^2 q3w + estramustine 10 mg/kg/d d1-5 (ADT+DE arm) or goserelin alone (ADT arm). Local therapy was administered 3 months after the start of hormonal treatment. The performance of pelvic ENI was left to the treating physician and was performed using 3D conformal radiotherapy. Median dose was 46 Gy in 2 Gy fractions. Only patients treated with primary radiotherapy are included in this analysis. Multivariate Cox model was used to look for an association between pelvic ENI and biochemical progression free survival (bPFS). Adjustment factors were: PSA level, T stage, Gleason score, pN stage.
Results: 413 patients were included from 2002 to 2006, out of which 358 were treated using primary radiotherapy and are analyzed in the present report. 208 patients received a pelvic radiotherapy and 150 prostate-only. PSA level, Gleason score or T stage did not differ according to the performance of pelvic radiotherapy. However pN+ patients more frequently received pelvic radiotherapy than pN0 patients (pelvic ENI 89% in pN+ pts and 47% in pN0 pts; p
Conclusions: This unplanned analysis of a recently completed trial failed to demonstrate a benefit of pelvic radiotherapy in high-risk localized prostate cancer patients. bPFS was negatively impacted by pN+ and positively impacted by chemotherapy in GETUG 12 patients treated by radiotherapy.

PD-0047

GU and GI toxicity in ASCENDE-RT*: a multicentre randomized trial of dose-escalated radiation for prostate cancer

S. Rodda[1], S. Tyldesley[1], W. Morris[1]
[1]*BC cancer Agency, Radiation Oncology, Vancouver, Canada*

Purpose/Objective: To report the grade 3 and higher (G3+) GU and GI toxicity for patients in a randomized trial evaluating the efficacy and safety of two different techniques for achieving dose escalation.
Materials and Methods: 398 men with National Comprehensive Cancer Network (NCCN) intermediate-risk (N=122) or high-risk (N=276) localized prostate cancer were accrued at 6 centers, stratified by risk group and randomized to one of two treatment arms. Both arms received 12 months of androgen deprivation therapy (ADT via LHRH depot injections), 8 months of which was given prior to starting whole pelvic irradiation (46Gy/23/#s). Patients randomized to the dose-escalated external beam arm (DE-EBRT, N=200) continued with a 3-d conformal boost to the prostate of 32Gy/16#s. Patients randomized to the low-dose-rate Brachytherapy arm (LDR-PB, N=198) had an ^{125}Iodine implant (MPD = 115Gy). Physician-scored toxicity was prospectively assessed and recorded using a modified LENT-SOMA scoring system. Follow up (FU) times for the toxicity data was calculated from the date of the start of Radiation treatment. The primary endpoint of the trial was disease free survival (DFS). There were 12 major protocol violations in each arm; all results are reported on an intent-to-treat basis.
Results: Patients randomized to LDR-PB were more than twice as likely to be disease-free at median FU of 6.5 yrs (hazard ratio = 2.11; 95% CI 0.1.31 – 3.42; P = 0.0022). Acute